

UNIVERSITY OF WISCONSIN
Department of Genetics,
Madison 6, Wisconsin.

January 27, 1951.

Dear Dr. Kauffmann:

Recent developments in our laboratory work on genetic recombination in *E. coli* have now made it possible to study large numbers of strains for their faculty of exchanging genetic characteristics. In a study of about 150 cultures from diverse sources, we have found already 9 or 10 new isolates which can be crossed with our original strain, "K-12". Some of these new isolates are in a much smoother phase than K-12, so that it is now practicable for us to study the transmission of antigenic factors, and we are in the process of immunizing rabbits.

So far, the strains we have examined have been chosen in a rather haphazard manner. I am writing now to beg your cooperation to make it possible for us to conduct a survey of coliform bacteria on a more rational basis, in order to determine whether there is some pattern common to those strains which can be "crossed".

I am referring, of course, to the collection of *E. coli* cultures which has been undertaken in your laboratory for the development of the serological classification of this group. It is doubtful whether any similar collection exists which is so well characterized as to source, cultural behavior, and serotype. Fully realizing the magnitude of this request, I would like to ask whether a fully representative set of cultures from this collection could be made available for our genetic studies. Our procedure has been simplified so that the preliminary tests for crossability take not much more time in our hands than a serological typing would in yours. The technique does not, therefore, impose a practical limit on the number of strains which can be examined profitably.

If world conditions were more stable, and my local responsibilities permitted, it would certainly be more attractive if I could undertake to visit your laboratory as a research fellow. I hope that future conditions may sometime permit me to apply to you for such accommodations. For the present, however, I must be limited to expressing my appreciation for whatever help you can offer.

In view of the potentially large scope of my request, I hope that you will not find amiss if I offer to arrange for the reimbursement of any expenses which might be involved in the shipment of such cultures in any number. (glassware, medium, technical assistance, shipping etc). On the other hand, please have no hesitation in informing me that this request is not feasible if it involves an unreasonable imposition on your facilities, or for any other reason.

To turn to another subject of possible interest to you, I am happy to report that fairly definite evidence of recombination has been secured for *Salmonella typhimurium*. The picture is greatly complicated by the prevalence of mutually active lysogenic phages. It seems to us that the instability of phage patterns in mixtures of types renders rather doubtful the stability of phage typing. Has the presence of such phages played an important role in minor serological variation, in your experience?

Yours sincerely,

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